

REMARKS

Amendment to the claims and Arguments to overcome the 35 U.S.C. 102/103

rejections will now be discussed with reference to the remarks made by the Examiner.

(1) The Examiner rejected the Claims 18 under 35 U.S.C. 112, second paragraph. The Examiner stated,

The claim recites the limitation “said weak light source” in Lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Since Claim 18 is a dependent claim from Claim 15. Therefore, independent Claim 15 has been amended to make clear the antecedent basis for the “said weak light source”.

(2) Supports of the Claim 15 and 18 are found in Applicants’ original specification on column 2, paragraph 17, lines 9-23, where it is stated that by applying the fluorescent ink on the fluorescent plate 40, the fluorescent plate 40 will emit fluorescent light without any extra illuminating equipment, so that the entire keyboard of the present invention can obtain an effect of a fluorescent keyboard.

(3) The Examiner rejected the Claims 1, 3, 6-8, 10, 13 and 14 under 35 U.S.C. 102(b) as being anticipated by Rohne et al, U.S. Patent No. 6,658,773.

Applicant's invention is not anticipated by Rohne in the following paragraphs.

Claims 1, 3, 6-8, 10, 13 and 14 distinguish Applicant's invention over Rohne in the following reasons. First, on page 2, item 2, of the Official Action of August 17, 2005, the Examiner mistakenly pointed out that the "fluorescent keyboard/ key cap/ upper cover" of Applicant's invention is the same as the "fluorescent label" of Rohne's teaching. However, Rohne only disclose the use of fluorescent label to cover the computer keyboard. Rohne disclose a fluorescent label comprising several layers. Such fluorescent label includes a lower sheet having an underside and an upper side, a layer of adhesive attaching to said underside of said lower sheet, a layer of luminescent material printed with luminescent ink attaching to said upper side of said lower sheet, and an opaque character (claim 1 of Rohne's teaching). Further, Rohne disclose a very complicated procedure for users' operation to reach a fluorescent effect on the keyboard. In operation, the user requires to break away a desired label from the key sheet, then he checks the size relative to his keyboard, and then he trims the label to fit. He then peels the paper backing and applies the label to the face of corresponding key (column 4, lines 48-54 of Rohne's teaching).

In contrast, Applicants' invention disclose a keyboard/ key cap/ upper cover that is recognizable under a weak light source/monitor (column 1, lines 11-21) having: a fluorescent material/ fluorescent ink (column 2, paragraph 15, lines 10-14; and column 2, paragraph 16, lines 17-20) (Fig. 1B and 2B) for negative plate printing; a symbol formed via normal ink; and a transparent plastic covering. Therefore, Rohne only teach the "fluorescent label" to cover the computer keyboard. Rohne do not teach the design of "fluorescent keyboard/ key cap/ upper cover" which does not need the trimming and peeling-off for users' operation.

Second, Rohne do not teach the negative plate printing technique, especially such technique *directly* applying on the keyboard/ key cap/ upper cover/ mouse. In Rohne, the invention does not clearly claim the teaching of negative plate printing. Rohne only disclos the "layer of luminescent material printed with luminescent ink" attached between several layers of sheets including a sheet of adhesive layer. Rohne do not explicitly disclose said "layer of luminescent material with luminescent ink" uses what kind of printing technique.

On the contrary, in Fig. 1B, Fig. 2B and Fig. 3C of Applicants' invention, it clearly described that the Applicant disclose a fluorescent ink for negative plate printing by

applying the fluorescent material onto the peripheral background of the printed symbol.

Thereby the periphery of the printed symbol on the key cap can emit fluorescent light

(column 2, paragraph 15, lines 5-7). Therefore, Rohne do not teach the technique of

negative plate printing, nor do them teach the fluorescent ink for negative plate printing

*directly* applying on the keyboard/ key cap/ upper cover.

Third, the Examiner mistakenly rejected the Claims 1, 3, 6-8, 13 and 14 under 35 U.S.C. 102(b). Based on the above description, the Applicants' invention distinguishes over Rohne's invention. Rohne teach only the fluorescent label. Rohne do not specifically claim the teaching of negative plate printing. Moreover, Rohne do not disclose the teaching of fluorescent ink for negative plate printing directly applying on the keyboard/key cap/upper cover. Furthermore, there is no evidence for a prior use or sale occurred in the States for more than one year before the date of Applicants' filing date. Therefore, the Applicant should successfully overcome 35 U.S.C. 102(b) rejection.

(4) The Examiner rejected the Claims 15 and 17-20 under 35 U.S.C. 102(b) as being anticipated by Katrinecz et al, U.S. Patent No. 6,773,128.

Applicants' invention is not anticipated by Katrinecz in the following paragraphs.

Claims 15 and 17-20 distinguish Applicants' invention over Katrinecz. On page 3, item 4, of the Official Action of August 17, 2005, the Examiner mistakenly pointed out that the "fluorescent keyboard upper cover" of Applicant' invention is the same as Katrinecz's invention.

(4a) Regarding Claims 15, 17 and 18, Katrinecz disclose, but do not claim "a keyboard, comprising a top plate 20, the keypads 10 extending through said top plate; a keyboard well plate with a plurality of holes, a luminescent sheet 100 adhered to the lower face of said key well plate that faces the surface of circuit board 40 (Fig 2 of Katrinecz's disclosure); wherein said luminescent sheet 100 is comprised of electro-luminescent (E-L) lamp (Fig 3 of Katrinecz's disclosure).

In contrast to Katrinecz's invention which requires the light source (i.e., the lamp) to emit the light coupled with a metallized polyester film (i.e., optically transmissive conductor) (Fig 3A of Katrinecz's intention), the Applicants' invention does not require any lamp nor the optically transmissive conductor. Such supports are found in Applicants' original specification on column 2, paragraph 17, lines 9-23, where it is stated that by applying the fluorescent ink on the fluorescent plate 40, the fluorescent plate 40 will emit

fluorescent light without any extra illuminating equipment, so that the entire keyboard of the present invention can obtain an effect of a fluorescent keyboard.

Therefore, Claims 15, 17 and 18 distinguish Applicants' invention over Katrinecz's disclosure. Furthermore, there is no evidence for a prior use or sale occurred in the States for more than one year before the date of Applicants' filing date. Therefore, the Applicant should successfully overcome 35 U.S.C. 102(b) rejection.

(4b) Regarding Claims 19 and 20, Katrinecz claim the "illuminated mouse comprising one or more exterior mouse components comprising an optically transmissive material and one or more luminescent lamps".

In contrast to Katrinecz's disclosure, as described in paragraph 4(a), the Applicants' invention do not require the teachings of the lamp light source nor the optically transmissive conductor. Therefore, Claims 19 and 20 distinguish Applicants' invention over Katrinecz's disclosure. Furthermore, there is no evidence for a prior use or sale occurred in the States for more than one year before the date of Applicants' filing date. Therefore, the Applicant should successfully overcome 35 U.S.C. 102(b) rejection.

(5) The Examiner rejected the Claims 2 and 9 under 35 U.S.C. 103(a) as being unpatentable over Rohne et al, U.S. Patent No. 6,658,773.

Applicants' invention is not obvious by Rohne in the following paragraphs.

First, from the above description, Rohne do not teach the negative plate printing technique, especially such technique *directly* applying on the keyboard/ key cap/ upper cover/ mouse. Rohne only disclose the "layer of luminescent material printed with luminescent ink" attached between several layers of sheets including a sheet of adhesive layer. Rohne do not teach explicitly the use of negative plate printing.

Second, Rohne do not explicitly disclose the use of positive plate printing as admitted on page 3, item 6, of the Official Action of August 17, 2005.

The Examiner further cited the prior art known as Shipman (US 6,217,183) to reject Applicants' patent application. Shipman teach a keyboard having illuminated key members including a light channeling membrane. However, Shipman further teach the requirement of low power consumption for backlighting, such as LCDs or LEDs (column 2, line 24-25).

On the contrary, the Applicants' invention is unobvious over Shipman because Shipman inevitably use electric energy only under the condition that electric energy can

keep on supplying, while the Applicant do not need the backlight device especially without the use of an illuminating equipment.

To sum up, Applicant's Claims 2 and 9 are unobvious over Rohne. The Examiner mistakenly rejected Applicant's invention under 35 U.S.C. 103(a) because Applicant's invention are different from Rohne's teachings. It would not have been obvious to one of ordinary skill in the art at the time of invention to modify Rohne and use positive/negative plate printing as taught by Shipman in order to provide a human interaction device/keyboard that can be used in multiple environments. Therefore, The Examiner should rule that the Claims 2 and 9 as being patentable over Rohne.

(6) The Examiner rejected the Claims 4, 5, 11, 12 and 16 under 35 U.S.C. 103(a) as being unpatentable over Rohne et al, U.S. Patent No. 6,658,773 as applied to Claims 1 and 8 above and Katrinecz et al. (US 6,773,128) as applied to Claim 15 above, and further in view of Sasaki (US 6,917,005).

Applicant's invention is not obvious by Rohne and Katrinecz in view of Sasaki in the following paragraphs.

First, the Applicant's invention are different from Rohne based on the above



description. Furthermore, Rohne and Katrinecz do not teach the use of transparent fluorescent ink and normal ink utilizing positive and negative plate printing, as stated on page 4, item 8, line 1-2 of the Official Action of August 17, 2005.

Second, the Applicant's invention are an improvement over Sasaki. Sasaki teach a transparent fluorescent ink printed on the key top that is been irradiated by black light having a wavelength within a range of 300nm to 400nm. Comparing to Sasaki, the Applicant' invention employs a simple transparent fluorescent ink printed on the human interaction device/keyboard that can be emitted without the restriction of wavelength limitation. Further, there is not backlight lamp source required in Applicant's invention. Therefore, the Applicant's invention are unobvious over Sasaki.

Third, the Applicant are unobvious over Rohne and Katrinecz in view of Sasaki under the theory of secondary considerations. Applicant's invention do not require any lamp, the restriction of the wavelength of fluorescent ink nor the requirement of optically transmissive conductor as described in Katrinecz and Sasaki. Moreover, the Applicant's products are more user-friendly than Rohne's which requires complicated users' operations. Furthermore, Rohne teach the keyboard labels that would be easily worn out, scratched-off or broken after the use of a period of time. Comparing to Rohne, the

Applicant's product can prevent such problems by directly employing the techniques of transparent fluorescent ink utilizing positive/negative plate printing onto the keyboard/key cap.

Regarding Claims 4, 5, 11, 12 and 16, and Claims 1 and 8 and 15, Applicant are unobvious over Rohne and Katrinecz in view of Sasaki. It would not have been obvious to one of ordinary skill in the art at the time of invention to modify Rohne and use transparent fluorescent ink as taught by Sasaki in order to provide a human interaction device/keyboard that can be used in multiple environments. Therefore, The Examiner should rule that the 4, 5, 11, 12 and 16, and Claims 1 and 8 and 15 as being patentable over Rohne and Katrinecz in view of Sasaki.

A mark-up version of the amended claims are attached in the following pages.

Should you have any question please call Applicant's agent at (510) 579-6211 or by mail.

Respectively submitted,

A handwritten signature in black ink, appearing to be 'Han-Yi Lee', written in a cursive style.

Han-Yi Lee

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